



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/996,186	11/28/2001	Juan Pablo Di Lelle	G&C 30566.214-US-01	3915

22462 7590 09/17/2003

GATES & COOPER LLP
HOWARD HUGHES CENTER
6701 CENTER DRIVE WEST, SUITE 1050
LOS ANGELES, CA 90045

EXAMINER

YANG, RYAN R

ART UNIT	PAPER NUMBER
----------	--------------

2672

DATE MAILED: 09/17/2003

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/996,186

Applicant(s)

DI LELLE, JUAN PABLO

Examiner

Ryan R Yang

Art Unit

2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3,4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-23 are pending in this application. Claims 1, 11 and 21-23 are independent claims. This action is non-final.
2. The present title of the invention is "Generating three dimensional text".

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 5, 9-13, 15 and 19-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Kubota et al. (JP 63-131270).

5. As per claim 1, Kubota et al., hereinafter Kubota, discloses an apparatus for generating three-dimensional text within images composited in real time, comprising means for generating said three-dimensional text from one or a plurality of text formatting templates, including processing means and storage means (Figure 1), wherein

said storage means stores said text formatting templates and instructions for said processing means (Figure 1 1 "two-dimensional character font memory device (1) that stores two-dimensional character fonts for multiple characters", page 4, line 15-16 and "Any type of device that allows input of the character string for composition can be

Art Unit: 2672

used as character string input device (2). In this application example, a word processor is used", page 4 last 2 lines of Translation, since a character string can be formed at 3, the three-dimensional character font forming device, whatever contains the character string can be considered as a template);

said instructions configure said processing means to perform the steps of:

defining one of said text formatting templates as a two-dimensional template equipped with Cartesian co-ordinates within a three-dimensional space (Figure 1 3 "This three-dimensional character font forming device (3) reads the two-dimensional character font from two-dimensional character font memory device (1)", page 5 line 4-6 of Translation and Figure 3 shows the templates with Cartesian co-ordinates within a three-dimensional space);

equipping said defined text formatting template with three-dimensional preferences with which to format text to be included in said template ("it imparts a prescribed depth for said two-dimensional character font so as to form a three-dimensional character font", page 5, line 7-8, where the prescribed depth is the three-dimensional preference);

equipping said defined text formatting template with said text ("all of the three-dimensional character fonts are formed by imparting depth d", page 5, line 13-14 of Translation); and

rendering said two-dimensional template including said text formatted according to said three-dimensional preferences within said three-dimensional space (Figure 1 3 "This three-dimensional character font forming device (3) reads the two-dimensional

character font from two-dimensional character font memory device (1) one by one for each character of the character string input from character string input device (2), and it imparts a prescribed depth for said two-dimensional character font so as to form a three-dimensional character font", page 5, line 4-8 of Translation).

6. As per claim 2, Kubota demonstrated all the elements as applied to the rejection of independent claim 1, supra, and further discloses one or a plurality of text formatting templates is a two-dimensional plane delimited by two sets of two parallel segments of an identical length, the respective extremities of the segments of the first set intersecting the respective extremities of the segments of the second set at a right angle ("Figure 3 is a diagram illustrating an example of the display image of the display device. The display image is compose of xy plane region (11) ... The operator makes use of the display image to perform allotment of the rectangular parallelepiped box-shaped pattern shown in Figure 4(a)", page 5, line 29-33 of Translation).

7. As per claim 3, Kubota demonstrated all the elements as applied to the rejection of dependent claims 2 and 3, supra, and further discloses said defining step of one of said text formatting templates as a two-dimensional template equipped with Cartesian co-ordinates within a three-dimensional space comprises either a two-dimensional rotation, or a three-dimensional rotation, or a scaling operation or any combination thereof ("one may perform allotment by inputting the command for assigning the x, y, z coordinates of the allotment position, the command for assigning rotation of characters around the x, y, z axes", page 6, line 13-15 and "the operator can input commands to change the character size, depth of characters, character shape (plain font, elongated

font, oblique font, etc.), character style, character color, etc”, page 6, line 20-21 of Translation).

8. As per claim 5, Kubota demonstrated all the elements as applied to the rejection of independent claim 1, supra, and further discloses said three-dimensional preferences with which to format text to be included in said template comprises either an extrusion depth, or one or a plurality of textures with which to equip said text, or one or a plurality of light sources with which to light said text, or any combination thereof (“all of the three-dimensional character fonts are formed by imparting depth d”, page 5, line 13-14 and “the operator can input commands to change the character size, depth of characters, character shape (plain font, elongated font, oblique font, etc.), character style, character color, etc”, page 6, line 20-21 of Translation).

9. As per claim 9, Kubota demonstrated all the elements as applied to the rejection of independent claim 1, supra, and further discloses said equipping step of said defined text formatting template with said text is performed in real time (“this invention pertains to a type of three-dimensional character composition device using a computer”, page 2, line 23-24; Figure 1 shows a block diagram of the inventive process using a computer, since there is no interruption to the process, the process is inherently performed in real time).

10. As per claim 10, Kubota demonstrated all the elements as applied to the rejection of independent claim 1, supra, and further discloses said rendering step of said two-dimensional template including said text formatted according to said three-dimensional preferences within said three-dimensional space is performed in real time (“this

invention pertains to a type of three-dimensional character composition device using a computer", page 2, line 23-24; Figure 1 shows a block diagram of the inventive process using a computer, since there is no interruption to the process, the process is inherently performed in real time).

11. As per claim 11, Kubota discloses a method of generating three-dimensional text within images composited in real time, comprising means for generating said three-dimensional text from one or a plurality of text formatting templates, including processing means and storage means (Figure 1), wherein

said storage means stores said text formatting templates and instructions for said processing means (Figure 1 1 "two-dimensional character font memory device (1) that stores two-dimensional character fonts for multiple characters", page 4, line 15-16 and "Any type of device that allows input of the character string for composition can be used as character string input device (2). In this application example, a word processor is used", page 4 last 2 lines of Translation, since a character string can be formed at 3, the three-dimensional character font forming device, whatever contains the character string can be considered as a template);

said instructions configure said processing means to perform the steps of:

defining one of said text formatting templates as a two-dimensional template equipped with Cartesian co-ordinates within a three-dimensional space (Figure 1 3 "This three-dimensional character font forming device (3) reads the two-dimensional character font from two-dimensional character font memory device (1)", page 5 line 4-6

of Translation and Figure 3 shows the templates with Cartesian co-ordinates within a three-dimensional space);

equipping said defined text formatting template with three-dimensional preferences with which to format text to be included in said template ("it imparts a prescribed depth for said two-dimensional character font so as to form a three-dimensional character font", page 5, line 7-8, where the prescribed depth is the three-dimensional preference);

equipping said defined text formatting template with said text ("all of the three-dimensional character fonts are formed by imparting depth d", page 5, line 13-14 of Translation); and

rendering said two-dimensional template including said text formatted according to said three-dimensional preferences within said three-dimensional space (Figure 1 3 "This three-dimensional character font forming device (3) reads the two-dimensional character font from two-dimensional character font memory device (1) one by one for each character of the character string input from character string input device (2), and it imparts a prescribed depth for said two-dimensional character font so as to form a three-dimensional character font", page 5, line 4-8 of Translation).

12. As per claim 12, Kubota demonstrated all the elements as applied to the rejection of independent claim 11, *supra*, and further discloses one or a plurality of text formatting templates is a two-dimensional plane delimited by two sets of two parallel segments of an identical length, the respective extremities of the segments of the first set intersecting the respective extremities of the segments of the second set at a right

angle ("Figure 3 is a diagram illustrating an example of the display image of the display device. The display image is compose of xy plane region (11) ... The operator makes use of the display image to perform allotment of the rectangular parallelepiped box-shaped pattern shown in Figure 4(a)", page 5, line 29-33 of Translation).

13. As per claim 13, Kubota demonstrated all the elements as applied to the rejection of claims 11 and 12, supra, and further discloses said defining step of one of said text formatting templates as a two-dimensional template equipped with cartesian coordinates within a three-dimensional space comprises either a two-dimensional rotation, or a three-dimensional rotation, or a scaling operation or any combination thereof ("one may perform allotment by inputting the command for assigning the x, y, z coordinates of the allotment position, the command for assigning rotation of characters around the x, y, z axes", page 6, line 13-15 and "the operator can input commands to change the character size, depth of characters, character shape (plain font, elongated font, oblique font, etc.), character style, character color, etc", page 6, line 20-21 of Translation).

14. As per claim 15, Kubota demonstrated all the elements as applied to the rejection of independent claim 11, supra, and further discloses said three-dimensional preferences with which to format text to be included in said template comprises either an extrusion depth, or one or a plurality of textures with which to equip said text, or one or a plurality of light sources with which to light said text, or any combination thereof ("all of the three-dimensional character fonts are formed by imparting depth d", page 5, line 13-14 and "the operator can input commands to change the character size, depth

Art Unit: 2672

of characters, character shape (plain font, elongated font, oblique font, etc.), character style, character color, etc”, page 6, line 20-21 of Translation).

15. As per claim 19, Kubota demonstrated all the elements as applied to the rejection of independent claim 11, supra, and discloses said equipping step of said defined text formatting template with said text is performed in real time. (“this invention pertains to a type of three-dimensional character composition device using a computer”, page 2, line 23-24; Figure 1 shows a block diagram of the inventive process using a computer, since there is no interruption to the process, the process is inherently performed in real time).

16. As per claim 20, Kubota demonstrated all the elements as applied to the rejection of independent claim 11, supra, and further discloses said rendering step of said two-dimensional template including said text formatted according to said three-dimensional preferences within said three-dimensional space is performed in real time (“this invention pertains to a type of three-dimensional character composition device using a computer”, page 2, line 23-24; Figure 1 shows a block diagram of the inventive process using a computer, since there is no interruption to the process, the process is inherently performed in real time).

17. As per claim 21, Kubota discloses a computer-readable medium having computer-readable instructions executable by a computer such that, when executing said instructions, a computer will perform the steps of

defining a text formatting template as a two-dimensional template equipped with Cartesian co-ordinates within a three-dimensional space (Figure 1 3 “This three-

dimensional character font forming device (3) reads the two-dimensional character font from two-dimensional character font memory device (1)", page 5 line 4-6 of Translation and Figure 3 shows the templates with Cartesian co-ordinates within a three-dimensional space);

equipping said defined text formatting template with three-dimensional preferences with which to format text to be included in said template ("it imparts a prescribed depth for said two-dimensional character font so as to form a three-dimensional character font", page 5, line 7-8, where the prescribed depth is the three-dimensional preference);

equipping said defined text formatting template with said text ("all of the three-dimensional character fonts are formed by imparting depth d", page 5, line 13-14 of Translation); and

rendering said two-dimensional template including said text formatted according to said three-dimensional preferences within said three-dimensional space (Figure 1 3 "This three-dimensional character font forming device (3) reads the two-dimensional character font from two-dimensional character font memory device (1) one by one for each character of the character string input from character string input device (2), and it imparts a prescribed depth for said two-dimensional character font so as to form a three-dimensional character font", page 5, line 4-8 of Translation).

Art Unit: 2672

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. Claims 4, 6, 8 and 14, 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kubota et al. as applied to claim 1 above.

20. As per claim 4, Kubota demonstrated all the elements as applied to the rejection of dependent claim 3, supra.

As for said two-dimensional rotation, three-dimensional rotation and scaling operation are implemented either by motion input or alphanumerical input or any combination thereof, Kubota discloses "one may perform allotment by inputting the command for assigning the x, y, z coordinates of the allotment position, the command for assigning rotation of characters around the x, y, z axes" (page 6, line 13-15 of Translation). Although Kubota does not explicitly disclose the input means to manipulate the character, however, since Kubota does disclose assigning the x, y, z coordinates and since a stylus and an alphanumeric input device are well known in the art for entering such information, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate such devices in order to easily inputting those information.

21. As per claim 6, Kubota demonstrated all the elements as applied to the rejection of dependent claim 5, supra.

As for said extrusion depth, one or a plurality of textures with which to equip said text and one or a plurality of light sources with which to light said text are implemented either by motion input or alphanumerical input or any combination thereof, Kubota discloses "the operator can input commands to change the character size, depth of characters, character shape (plain font, elongated font, oblique font, etc.), character style, character color, etc" (page 6, line 20-21 of Translation). Although Kubota does not explicitly disclose the input means to manipulate the character, however, since Kubota does disclose operator can input commands to change the character and since a stylus and an alphanumeric input device are well known in the art for entering such information, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate such devices in order to easily inputting those information).

22. As per claim 8, Kubota demonstrated all the elements as applied to the rejection of independent claim 1, supra.

As for text equipping said defined text formatting template is alphanumerical data inputted either by means of physical input means or by means of a data source linked to said text formatting template, Kubota discloses "one may perform allotment by inputting the command for assigning the x, y, z coordinates of the allotment position, the command for assigning rotation of characters around the x, y, z axes" (page 6, line 13-15 of Translation). Although Kubota does not explicitly disclose the input means to manipulate the character, however, since Kubota does disclose assigning the x, y, z coordinates and since a stylus and an alphanumeric input device are well known in the

Art Unit: 2672

art for entering such information, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate such devices as inputting means in order to easily inputting those information.

23. As per claim 14, Kubota demonstrated all the elements as applied to the rejection of dependent claim 13, supra.

As for said two-dimensional rotation, three-dimensional rotation and scaling operation are implemented either by motion input or alphanumerical input or any combination thereof, Kubota discloses "one may perform allotment by inputting the command for assigning the x, y, z coordinates of the allotment position, the command for assigning rotation of characters around the x, y, z axes" (page 6, line 13-15 of Translation). Although Kubota does not explicitly disclose the input means to manipulate the character, however, since Kubota does disclose assigning the x, y, z coordinates and since a stylus and an alphanumeric input device are well known in the art for entering such information, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate such devices in order to easily inputting those information.

24. As per claim 16, Kubota demonstrated all the elements as applied to the rejection of dependent claim 15, supra.

As for said extrusion depth, one or a plurality of textures with which to equip said text and one or a plurality of light sources with which to light said text are implemented either by motion input or alphanumerical input or any combination thereof, Kubota discloses "the operator can input commands to change the character size, depth of

Art Unit: 2672

characters, character shape (plain font, elongated font, oblique font, etc.), character style, character color, etc" (page 6, line 20-21 of Translation). Although Kubota does not explicitly disclose the input means to manipulate the character, however, since Kubota does disclose operator can input commands to change the character and since a stylus and an alphanumeric input device are well known in the art for entering such information, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate such devices in order to easily inputting those information).

25. As per claim 18, Kubota demonstrated all the elements as applied to the rejection of independent claim 11, supra.

As for text equipping said defined text formatting template is alphanumerical data inputted either by means of physical input means or by means of a data source linked to said text formatting template, Kubota discloses "one may perform allotment by inputting the command for assigning the x, y, z coordinates of the allotment position, the command for assigning rotation of characters around the x, y, z axes" (page 6, line 13-15 of Translation). Although Kubota does not explicitly disclose the input means to manipulate the character, however, since Kubota does disclose assigning the x, y, z coordinates and since a stylus and an alphanumeric input device are well known in the art for entering such information, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate such devices as inputting means in order to easily inputting those information.

26. Claims 7 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kubota et al. as applied to claim 1 above, and further in view of Neville et al.

(5,803,629), Ellson et al. (5,805,783) and Feld et al. (US 2001/0026272).

27. As per claim 7, Kubota demonstrated all the elements as applied to the rejection of independent claim 1, supra.

Kubota discloses an apparatus to generate three-dimensional text. It is noted that Kubota does not explicitly disclose said text is one or a plurality of ASCII characters equipped with a font and font size, however, this is known in the art as taught by Neville et al., hereinafter Neville. Neville discloses an apparatus for rendering characters in which "a string of characters is entered; ... this step is typically accomplished using a keyboard or other data-entry device, actuation of which results in computer storage of ASCII or other codes corresponding to the selected characters. Preferably, the user is accorded the option of selecting a point size and font style as well (steps 302, 304)" (column 6, line 26-32).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Neville into Kubota because Kubota discloses an apparatus to generate three-dimensional text and Neville discloses the generated code can be standardized ASCII characters with a font and font size in order easily generate a string of characters.

Kubota and Neville combined disclose a method of generating three-dimensional text. It is noted that Kubota and Neville do not disclose every outline of which is subsequently divided into a number of vertices, such that said every outline is divided

Art Unit: 2672

into a number of segments that are tessellated into a number of polygons, however, this is known in the art as taught by Ellson et al., hereinafter Ellson. Ellson discloses a system of generating three-dimensional text in which "A geometric model can be represented by a set of three-dimensional coordinates of vertices and connections and groupings among vertices to determine polygonal partitions in the object. That is, the coordinates with an inherent connection order and grouping, fully define the object. The coordinates and connection order can be represented as an ordered list of vertices of a polygon" (column 5, line 48-55).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Ellson into Kubota and Neville because Kubota and Neville disclose a method of generating three-dimensional text and Ellson disclose the three-dimensional can be represented with polygons in order to easily represent a three-dimensional text.

Kubota, Neville and Ellson combined disclose an apparatus to generate three-dimensional text. It is noted that Kubota, Neville and Ellson do not disclose said number of polygons depending upon the final rendering resolution, however, this is known in the art as taught by Feld et al., hereinafter Feld. Feld discloses a method of generating three-dimensional model in which "The number of polygons of the virtual model and the number of vertices of the wear article can vary depending on the desired accuracy and resolution of the person and article they represent, respectively" ([0063] line 10-13).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Feld into Kubota, Neville and Ellson

because Kubota, Neville and Ellson combined disclose an apparatus to generate three-dimensional text and Feld discloses the number of polygons used can depend on the resolution desired in order to properly represent the three-dimensional text.

28. As per claim 17, Kubota demonstrated all the elements as applied to the rejection of dependent claim 11, *supra*.

Kubota discloses an apparatus to generate three-dimensional text. It is noted that Kubota does not explicitly disclose said text is one or a plurality of ASCII characters equipped with a font and font size, however, this is known in the art as taught by Neville et al., hereinafter Neville. Neville discloses an apparatus for rendering characters in which "a string of characters is entered; ... this step is typically accomplished using a keyboard or other data-entry device, actuation of which results in computer storage of ASCII or other codes corresponding to the selected characters. Preferably, the user is accorded the option of selecting a point size and font style as well (steps 302, 304)" (column 6, line 26-32).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Neville into Kubota because Kubota discloses an apparatus to generate three-dimensional text and Neville discloses the generated code can be standardized ASCII characters with a font and font size in order easily generate a string of characters.

Kubota and Neville combined disclose a method of generating three-dimensional text. It is noted that Kubota and Neville do not disclose every outline of which is subsequently divided into a number of vertices, such that said every outline is divided

into a number of segments that are tessellated into a number of polygons, however, this is known in the art as taught by Ellson et al., hereinafter Ellson. Ellson discloses a system of generating three-dimensional text in which "A geometric model can be represented by a set of three-dimensional coordinates of vertices and connections and groupings among vertices to determine polygonal partitions in the object. That is, the coordinates with an inherent connection order and grouping, fully define the object. The coordinates and connection order can be represented as an ordered list of vertices of a polygon" (column 5, line 48-55).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Ellson into Kubota and Neville because Kubota and Neville disclose a method of generating three-dimensional text and Ellson disclose the three-dimensional can be represented with polygons in order to easily represent a three-dimensional text.

Kubota, Neville and Ellson combined disclose an apparatus to generate three-dimensional text. It is noted that Kubota, Neville and Ellson do not disclose said number of polygons depending upon the final rendering resolution, however, this is known in the art as taught by Feld et al., hereinafter Feld. Feld discloses a method of generating three-dimensional model in which "The number of polygons of the virtual model and the number of vertices of the wear article can vary depending on the desired accuracy and resolution of the person and article they represent, respectively" ([0063] line 10-13).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Feld into Kubota, Neville and Ellson

because Kubota, Neville and Ellson combined disclose an apparatus to generate three-dimensional text and Feld discloses the number of polygons used can depend on the resolution desired in order to properly represent the three-dimensional text.

29. Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kubota et al. as applied to claim 1 above, and further in view of Ellson et al. (5,805,783).

30. As per claim 22, Kubota discloses a computer-readable memory system having computer-readable data stored therein, comprising

one or a plurality of 3D text templates (Figure 3); and

a 3D text application with which to define, configure and render said 3D text templates (Figure 1 3 "This three-dimensional character font forming device (3) reads the two-dimensional character font from two-dimensional character font memory device (1) one by one for each character of the character string input from character string input device (2), and it imparts a prescribed depth for said two-dimensional character font so as to form a three-dimensional character font", page 5, line 4-8 of Translation).

Kubota discloses a system to generate three-dimensional text. It is noted that Kubota does not explicitly disclose further comprising one or a plurality of textures; one or a plurality of object meshes; and an objects database, however, this is known in the art as taught by Ellson et al., hereinafter Ellson. Ellson discloses a system of generating three-dimensional character in which a plurality of textures (Figure 7 88); one or a plurality of object meshes (Figure 3 36 where the plurality of polygon surface indicating using meshes); and an objects database (Ellson consider his fonts are

graphical objects), where "The description of character is preferably stored in a linked list for later transfer to the rendering engine" (column 12, line 7-9).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Ellson into Kubota because Kubota discloses a system of generating three-dimensional text and Ellson discloses Texture, polygon meshes and graphical objects can be used in order to generate more versatile three-dimensional text.

31. As per claim 23, Kubota and Ellson demonstrated all the elements as applied to the rejection of independent claim 22, *supra*, and Kubota further discloses said program instructions are configured to;

define a text formatting templates as a two-dimensional template equipped with Cartesian co-ordinates within a three-dimensional space (Figure 1 3 "This three-dimensional character font forming device (3) reads the two-dimensional character font from two-dimensional character font memory device (1)", page 5 line 4-6 of Translation and Figure 3 shows the templates with Cartesian co-ordinates within a three-dimensional space);

equip said defined text formatting template with three-dimensional preferences with which to format text to be included in said template ("it imparts a prescribed depth for said two-dimensional character font so as to form a three-dimensional character font", page 5, line 7-8, where the prescribed depth is the three-dimensional preference);

equip said defined text formatting template with said text ("all of the three-dimensional character fonts are formed by imparting depth d", page 5, line 13-14 of Translation); and

render said two-dimensional template including said text formatted according to said three-dimensional preferences within said three-dimensional space (Figure 1 3 "This three-dimensional character font forming device (3) reads the two-dimensional character font from two-dimensional character font memory device (1) one by one for each character of the character string input from character string input device (2), and it imparts a prescribed depth for said two-dimensional character font so as to form a three-dimensional character font", page 5, line 4-8 of Translation).

Conclusion

32. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Inquiries

33. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Ryan Yang** whose telephone number is **(703) 308-6133**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Michael Razavi**, can be reached at **(703) 305-4713**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.



Ryan Yang
September 8, 2003